

REMARKS

The Examiner is thanked for the clarity and conciseness of the Office Action mailed on March 25, 2003 in the parent patent application (serial number 09/521,192) and for the citation of the references which have been studied with interest and care.

Claim Rejections - 35 U.S.C. §§ 102 and 103

Claims 1 and 5 were rejected under 35 U.S.C. 102(b) as being anticipated by Chang et al. (US 5,717,505). Claims 2-3 were rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (US 5,717,505) in view of Noda et al. (US 5,434,680). Claim 4 was rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (US 5,717,505) in view of Morikawa et al. (US 5,537,219). Claims 6-7, 10-11, 13-20¹ were rejected under 35 U.S.C. 103(a) as being unpatentable over Morikawa et al. (US 5,537,219).

Chang et al. discloses a dust-free scanner that appears to employ a Contact Image Sensor (CIS) technology. Chang et al. specifically teaches inclusion of a glass scan window 12 and addresses the problem of dust being carried to the scan window by providing a dust collecting padding 15 at the leading edge of the window.

In a CIS scanner, the image sensor lies just under the document to be scanned so the sensors catch the reflected light directly. Referring to FIG. 3 of Chang et al., the light incident on the surface of the document 10 is at the focal point 24, from which the light is reflected to the sensing system 16.

Applicants' dust tolerant scanner is readily distinguishable from the Chang et al. scanner at least for the reason that the cited reference fails to disclose or suggest a "media conformance member including an aperture through which the optical path extends without obstruction such that dust or debris can fall through the aperture". Accordingly, claims 1 and 5 are not anticipated by Chang et al.

Additionally, Applicants' dust tolerant scanner employs Charged-Couple Device (CCD) technology which is significantly different from the CIS scanner of Chang et al. With a CCD scanner, light reflected from the original document passes through a system of mirrors and lenses which redirect the light to a CCD array. Given the much narrower depth of focus of a CIS scanner, it is respectfully submitted that one of ordinary skill in the art would not have been motivated to remove the glass scan window from such a scanner.

¹ In the Office Action, claims 19-20 were also indicated as being allowable if rewritten in independent form. Accordingly, it appears that the Examiner intended to refer to claims 6-7, 10-11, 13-18 (in Paragraph 6 of the Office Action), rather than claims 6-7, 10-11, 13-20.

Noda et al. discloses an image scanner for a document which incorporates a transparent member 34 on a lower surface for passing reading and reflecting light while preventing entry of dust and foreign matter into the scanner housing. A surface 34b of the transparent member 34 for passage of reflected light is located a distance L (FIG. 1) from the document 6 outside the depth of field of the lens 13 (FIG. 2).

Noda et al. does not disclosure or suggest a media conformance member and certainly not a "media conformance member including an aperture through which the optical path extends without obstruction such that dust or debris can fall through the aperture". For the reasons discussed above, and in view of the amendment to underlying claim 1, it is respectfully submitted that claims 2 and 3 would not have been obvious to one of ordinary skill in the art over the combined teachings of the cited references.

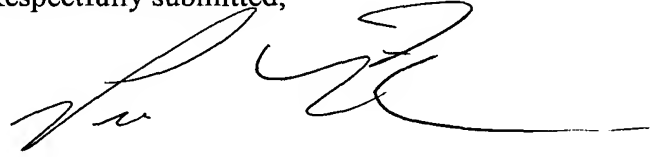
Morikawa et al. discloses a movable image reading apparatus provided with white reference sheets. Morikawa et al. does not, however, disclose or suggest a "media conformance member including an aperture through which the optical path extends without obstruction such that dust or debris can fall through the aperture".

The platen glass 101 of Morikawa et al. does not, it is respectfully submitted, disclose or suggest the media scan assembly as claimed. If anything, Morikawa et al. teaches away from Applicants' dust free architecture by disclosing a white level follower circuit for addressing disturbance of the white reference level due to dust or stain deposited on the platen glass. [Morikawa et al., column 28, lines 13-22.] For the reasons discussed above, and in view of the amendments to the underlying independent claims, withdrawal of the rejections made in paragraphs 5 and 6 of the Office Action is respectfully requested.

CONCLUDING REMARKS

Applicants submit that the application is in condition for allowance. Concurrence by the Examiner and early passage of the application to issue are respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Peter L. Holmes', written over a horizontal line.

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